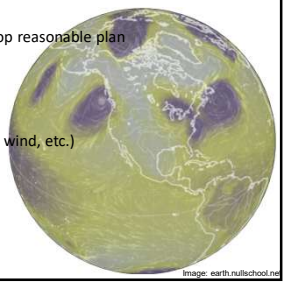
1

We need weather info before, during & after

- Before we burn
  - Anticipate likely conditions to help us develop reasonable plan
  - Anticipate fuel moisture conditions
  - Identify acceptable burn window
- During the burn
  - How conditions change throughout day
  - Notice of hazards (thunderstorms, changing wind, etc.)
- After the burn
  - How much mop-up
  - How much patrol
  - When to declare fire out



2

Weather information sources

- Remote Automated Weather Stations (RAWS)
- PRISM climate data
- National Weather Service forecasts
- SPOT weather forecasts
- Weather apps (e.g. Windy)

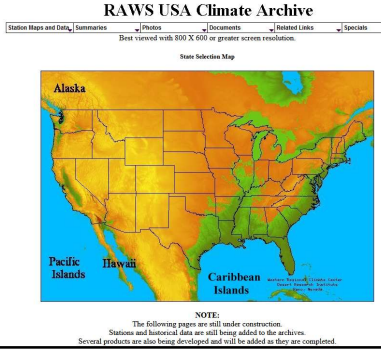
3

RAWS

- Approx 2200 located throughout US
- Typically owned by wildland fire agencies
- Feeds data to agencies and to weather services
- Wind speed and direction, air temp, RH, wet bulb, dew point, precipitation
- May include fuel moisture (10-hr) and temp
- Variety of table, summaries, charts – both current and historic

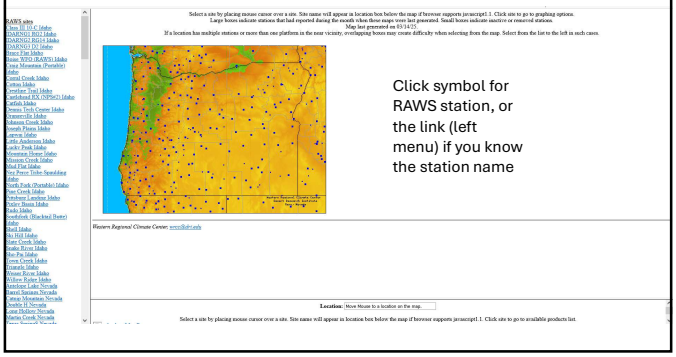
4

RAWS https://raws.dri.edu/



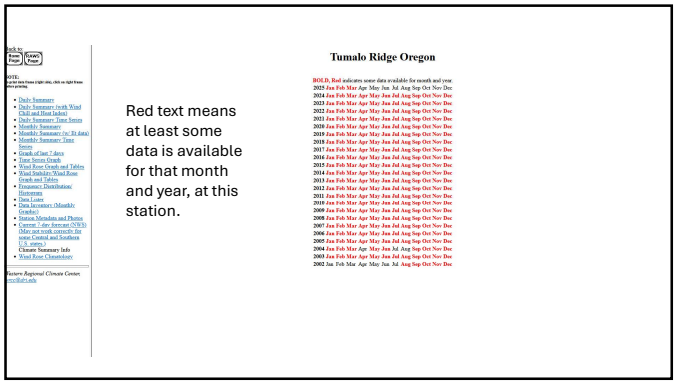
Click on map to drill down to your location

5

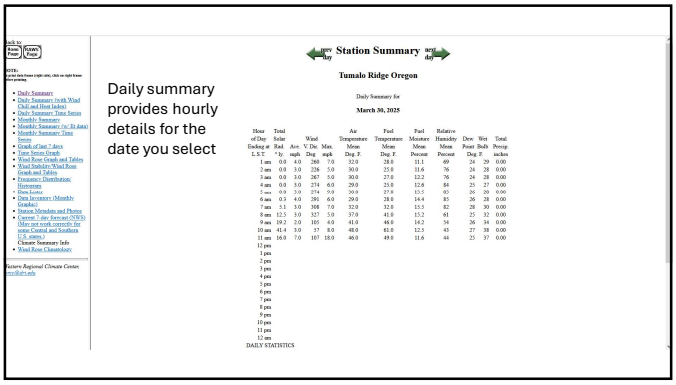


Click symbol for RAWS station, or the link (left menu) if you know the station name

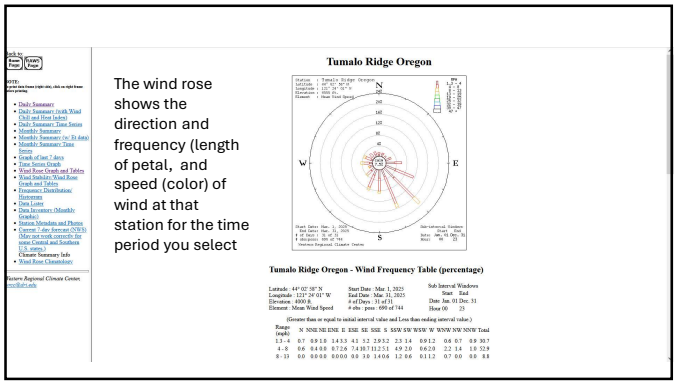
6


Red text means at least some data is available for that month and year, at this station.
Tumalo Ridge Oregon
BOLD, Red indicates some data available for month and year.

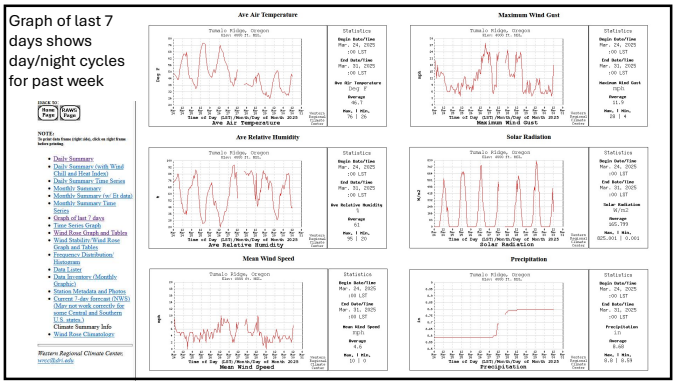
7


Daily summary provides hourly details for the date you select
Station Summary
Tumalo Ridge Oregon
March 30, 2025

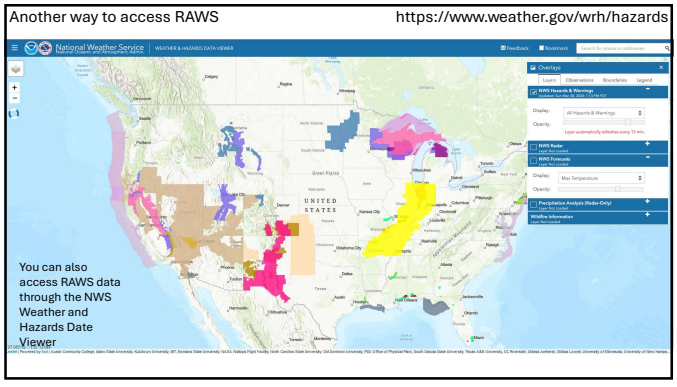
8


The wind rose shows the direction and frequency (length of petal, and speed (color) of wind at that station for the time period you select
Tumalo Ridge Oregon
Tumalo Ridge Oregon - Wind Frequency Table (percentage)

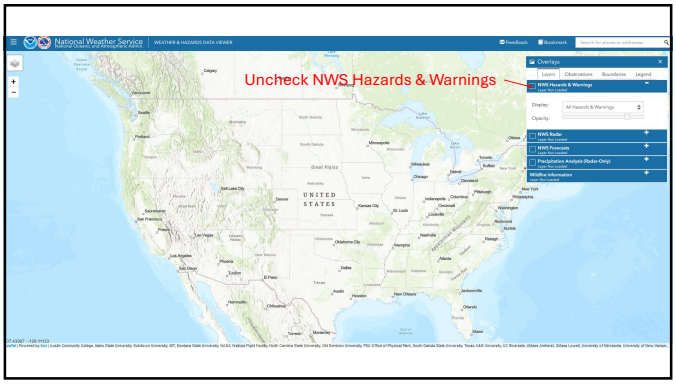
9


Graph of last 7 days shows day/night cycles for past week
Ave Air Temperature
Maximum Wind Gust
Ave Relative Humidity
Solar Radiation
Mean Wind Speed
Precipitation

10


Another way to access RAWS
https://www.weather.gov/wrh/hazards
You can also access RAWS data through the NWS Weather and Hazards Date Viewer

11


Uncheck NWS Hazards & Warnings

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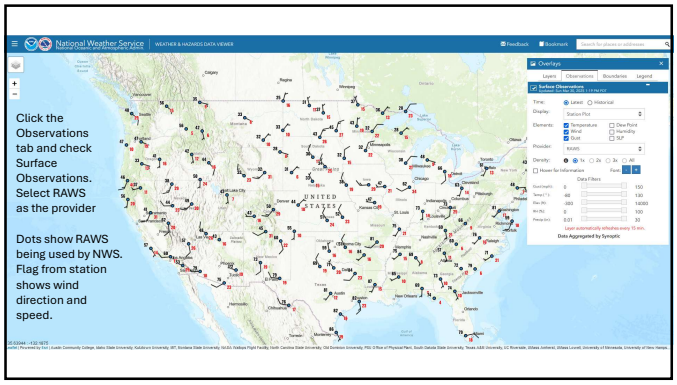

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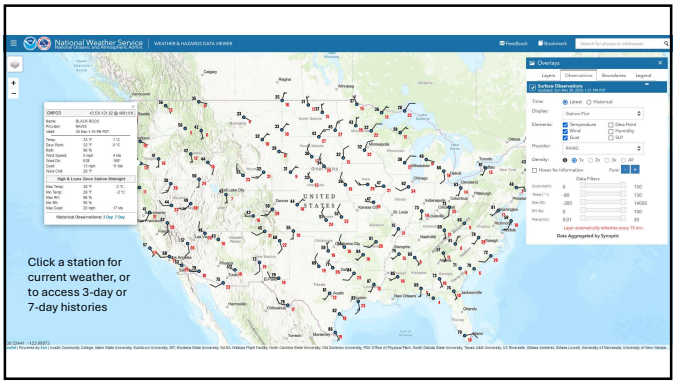

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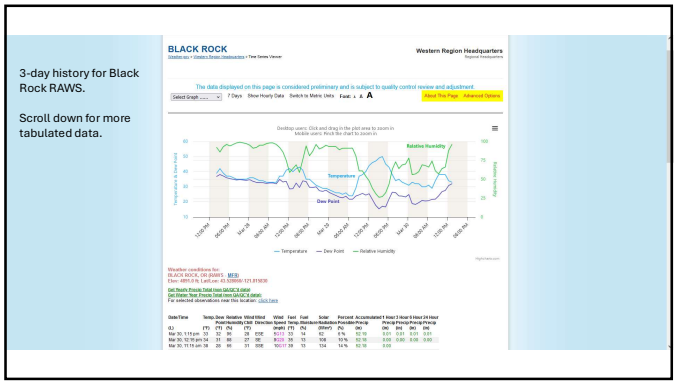

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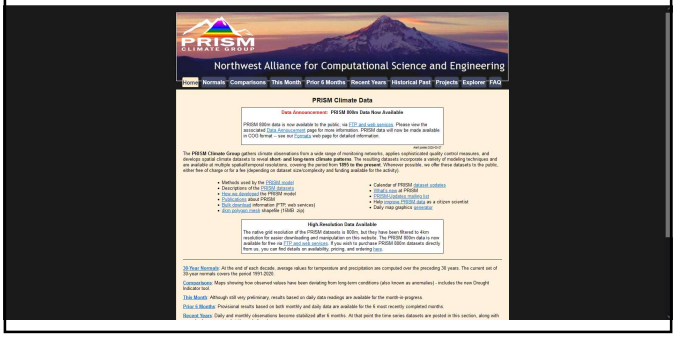
Climate Data https://prism.oregonstate.edu/



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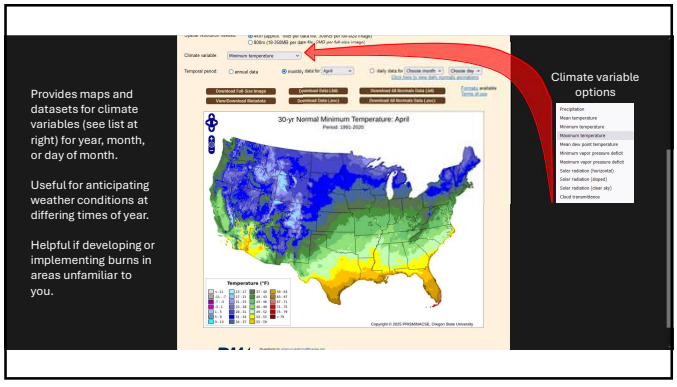


17

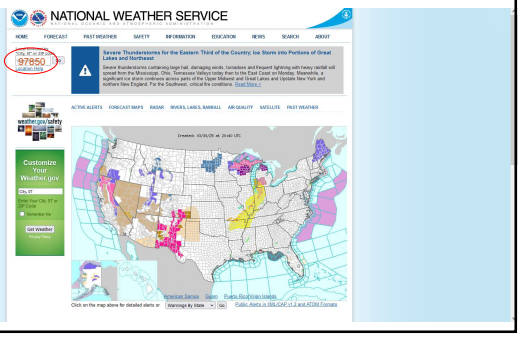
Fire Weather Forecast https://www.weather.gov/

18

Fire Weather Forecast https://www.weather.gov/

Go to NWS website

Enter zip code for area near your burn unit and “go”

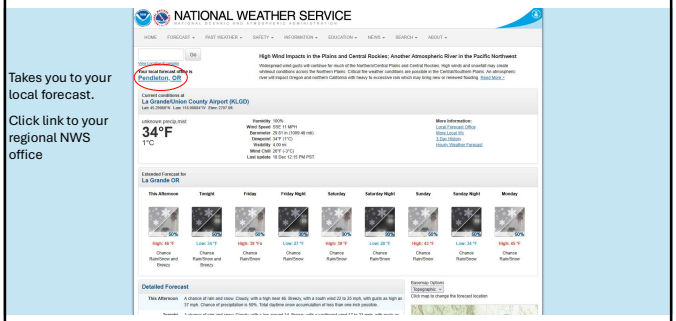


19

Fire Weather Forecast https://www.weather.gov/

Takes you to your local forecast.

Click link to your regional NWS office



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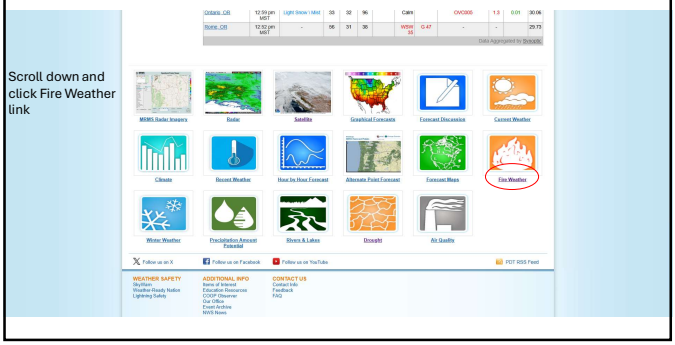
Fire Weather Forecast https://www.weather.gov/

Scroll down and click Fire Weather link



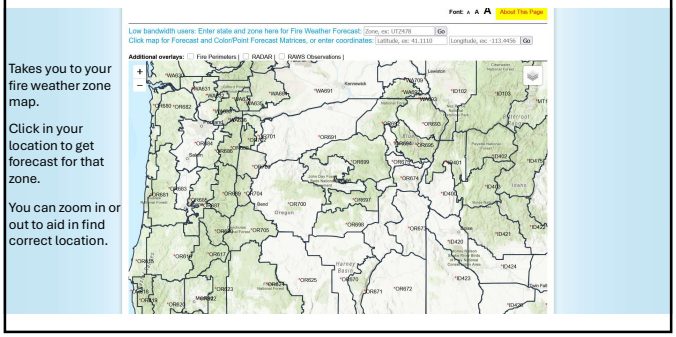
21

Fire Weather Forecast https://www.weather.gov/

Takes you to your fire weather zone map.

Click in your location to get forecast for that zone.

You can zoom in or out to aid in find correct location.



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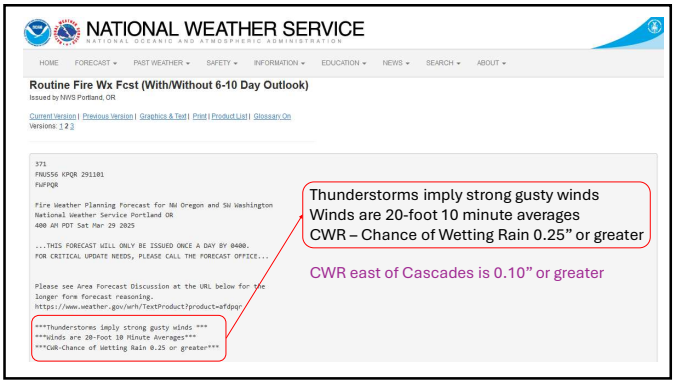

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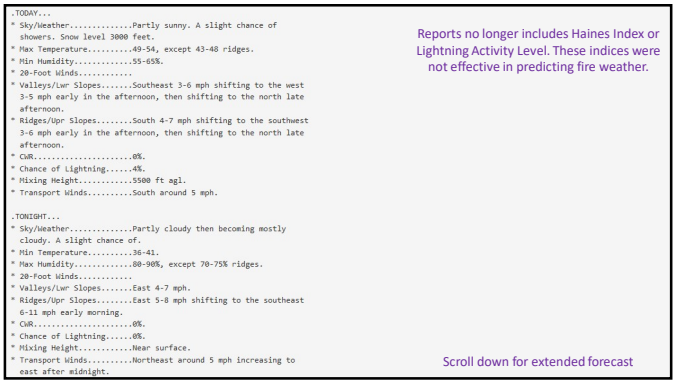

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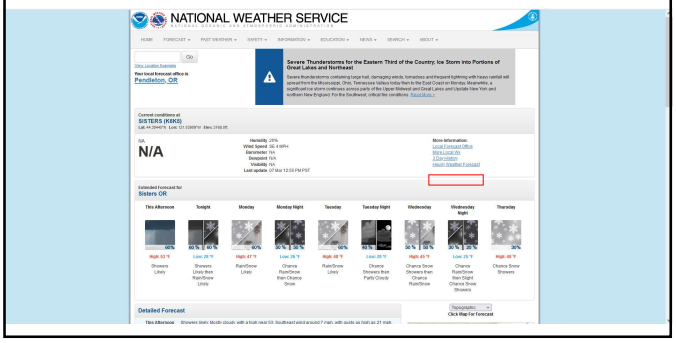
Local weather forecast for Sisters OR



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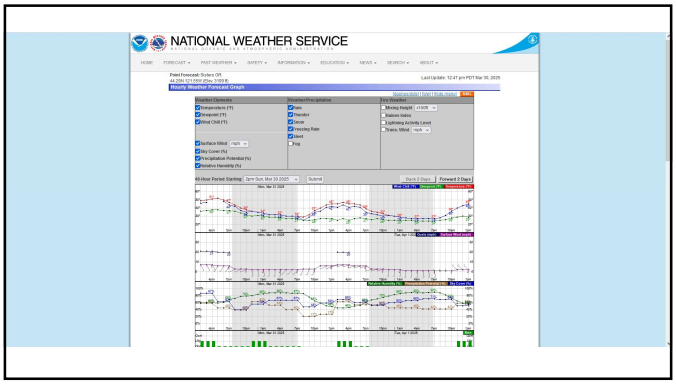
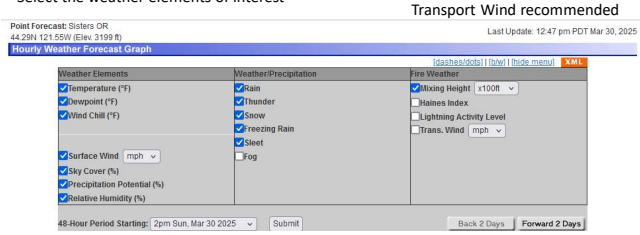


26

Select the weather elements of interest

Mixing height and Transport Wind recommended



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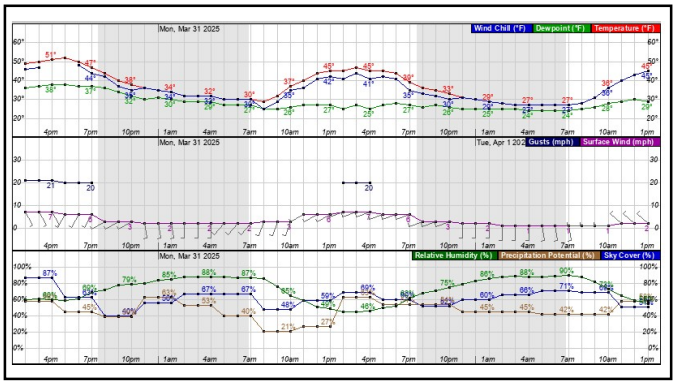

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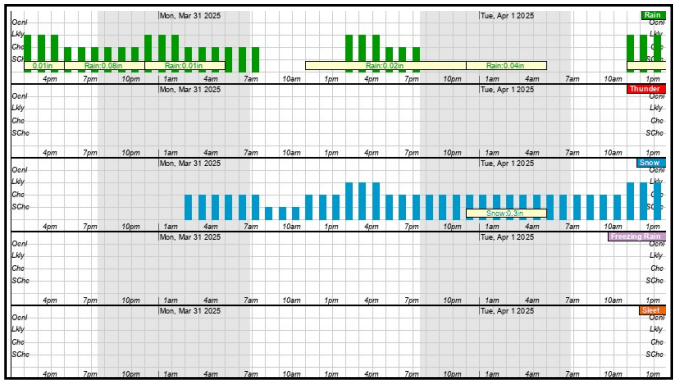

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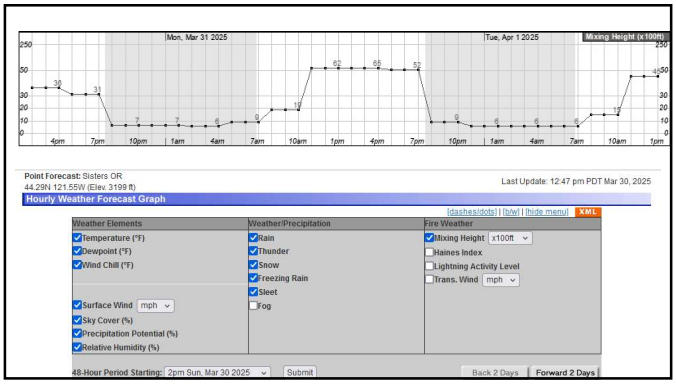
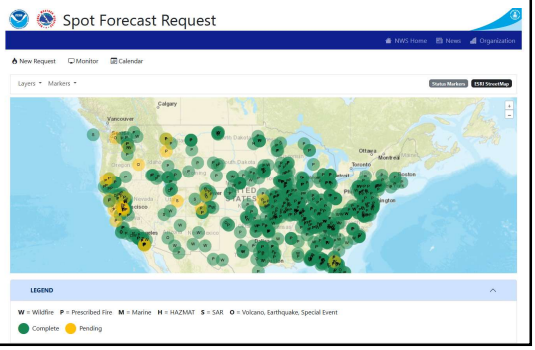


30

Spot Weather Forecast https://spot.weather.gov/

Custom forecast for a specific location.

Technically – only available by agency request.



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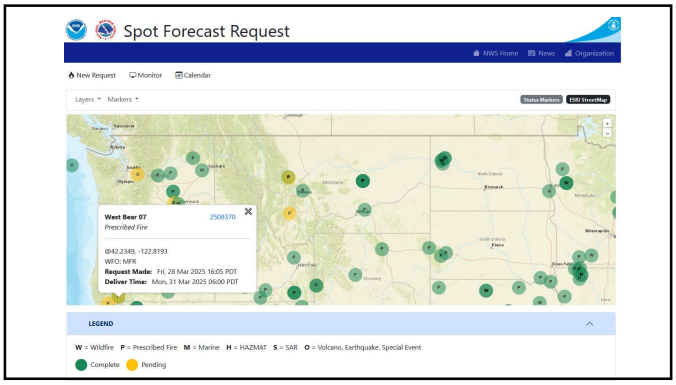

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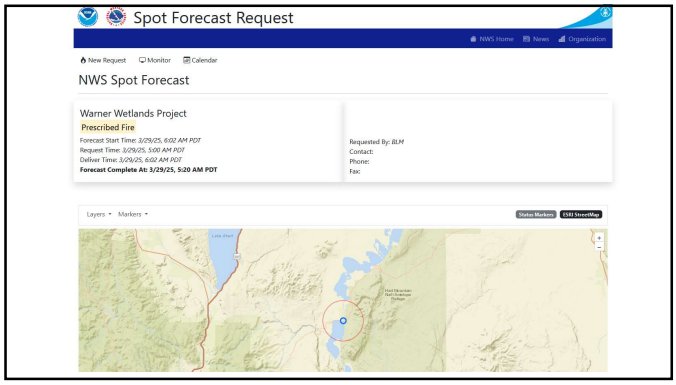

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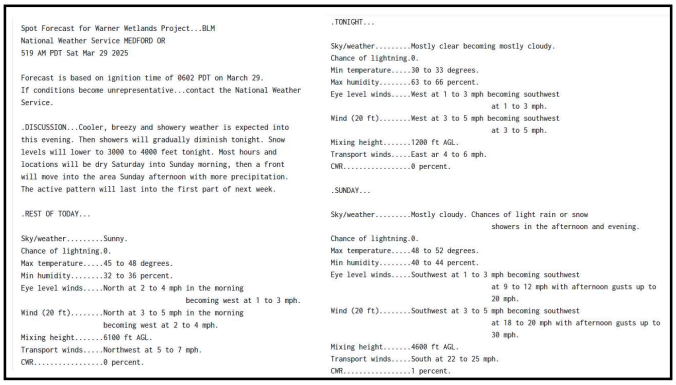
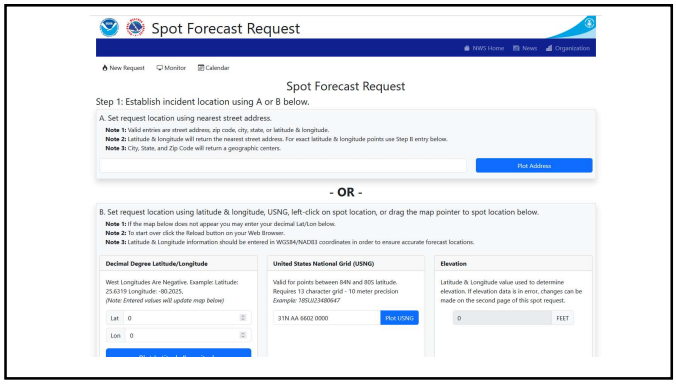


```
Spot Forecast for Warner Wetlands Project...BLM
National Weather Service MEDFORD OR
519 AM PDT Sat Mar 29 2025

Forecast is based on ignition time of 0602 PDT on March 29.
If conditions become unrepresentative...contact the National Weather
Service.

.DISCUSSION...Cooler, breezy and showery weather is expected into
this evening. Then showers will gradually diminish tonight. Snow
levels will lower to 3000 to 4000 feet tonight. Most hours and
locations will be dry Saturday into Sunday morning, then a front
will move into the area Sunday afternoon with more precipitation.
The active pattern will last into the first part of next week.

.REST OF TODAY...

Sky/weather.........Sunny.
Chance of lightning.0.
Max temperature.....45 to 48 degrees.
Min humidity........32 to 36 percent.
Eye level winds.....North at 2 to 4 mph in the morning
                    becoming west at 1 to 3 mph.
Wind (20 ft)........North at 3 to 5 mph in the morning
                    becoming west at 2 to 4 mph.
Mixing height.......6100 ft AGL.
Transport winds.....Northwest at 5 to 7 mph.
CWR.................0 percent.

.TONIGHT...

Sky/weather.........Mostly clear becoming mostly cloudy.
Chance of lightning.0.
Min temperature.....30 to 33 degrees.
Max humidity........63 to 66 percent.
Eye level winds.....West at 1 to 3 mph becoming southwest
                    at 1 to 3 mph.
Wind (20 ft)........West at 3 to 5 mph becoming southwest
                    at 3 to 5 mph.
Mixing height.......1200 ft AGL.
Transport winds.....East at 4 to 6 mph.
CWR.................0 percent.

.SUNDAY...

Sky/weather.........Mostly cloudy. Chances of light rain or snow
                    showers in the afternoon and evening.
Chance of lightning.0.
Max temperature.....48 to 52 degrees.
Min humidity........40 to 44 percent.
Eye level winds.....Southwest at 1 to 3 mph becoming southwest
                    at 9 to 12 mph with afternoon gusts up to
                    20 mph.
Wind (20 ft)........Southwest at 3 to 5 mph becoming southwest
                    at 18 to 20 mph with afternoon gusts up to
                    30 mph.
Mixing height.......4600 ft AGL.
Transport winds.....South at 22 to 25 mph.
CWR.................1 percent.
```

34



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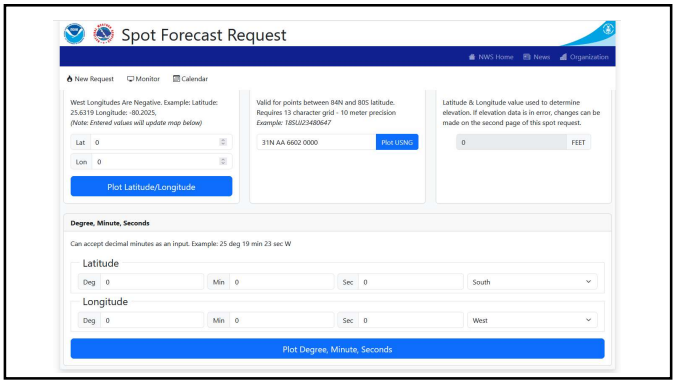

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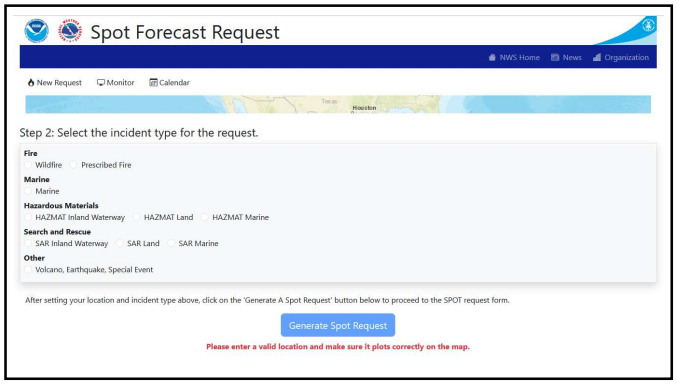

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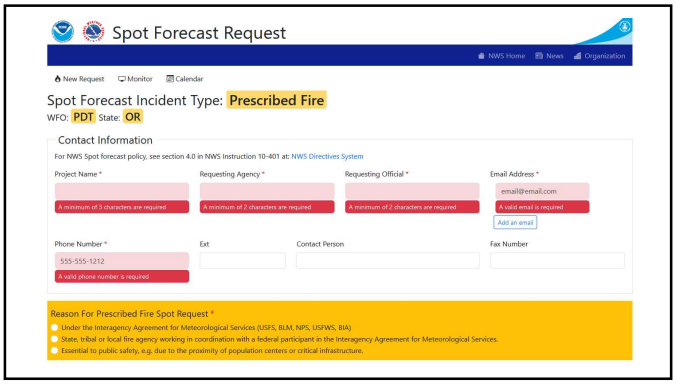

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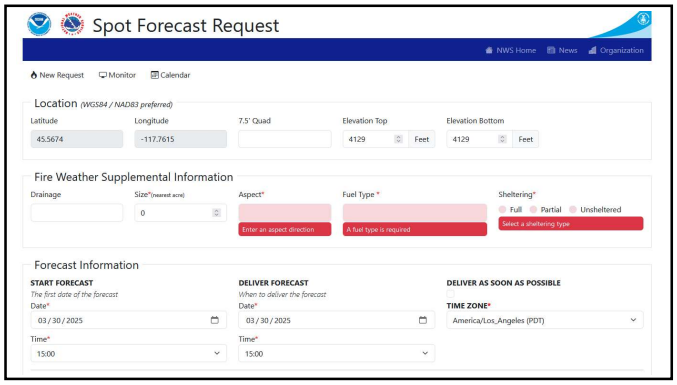

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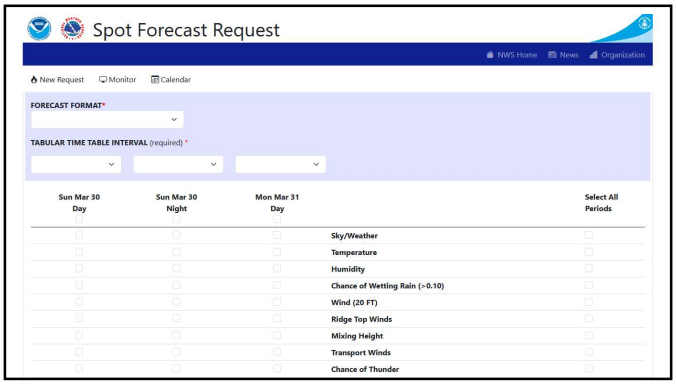

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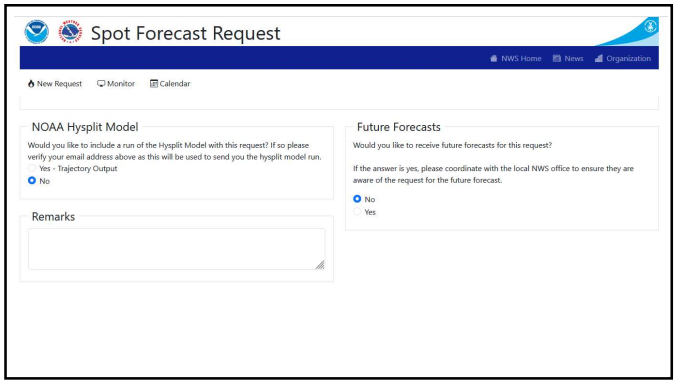

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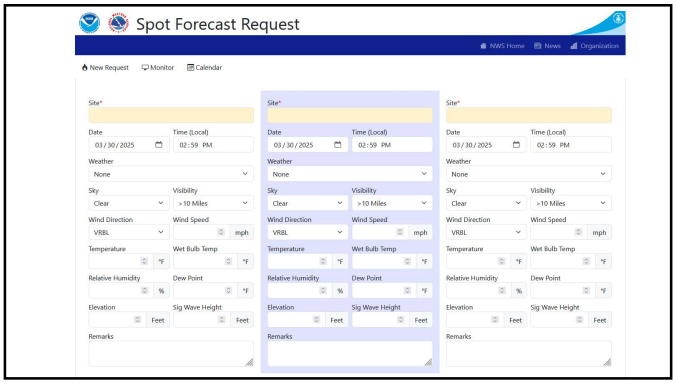

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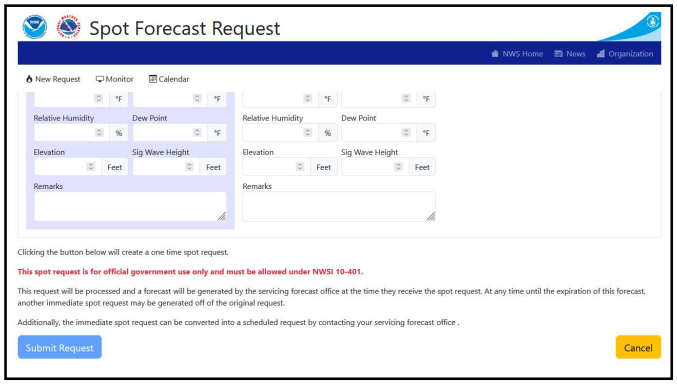

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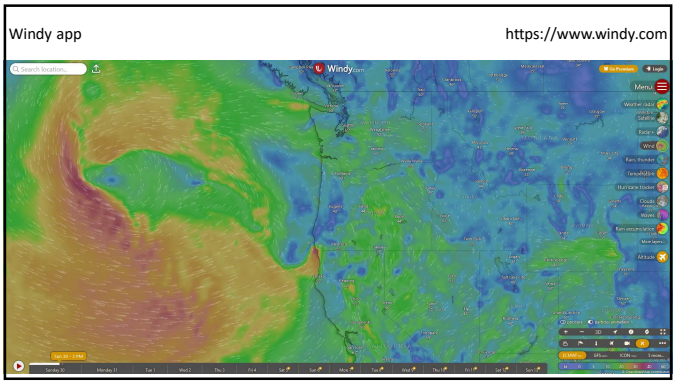

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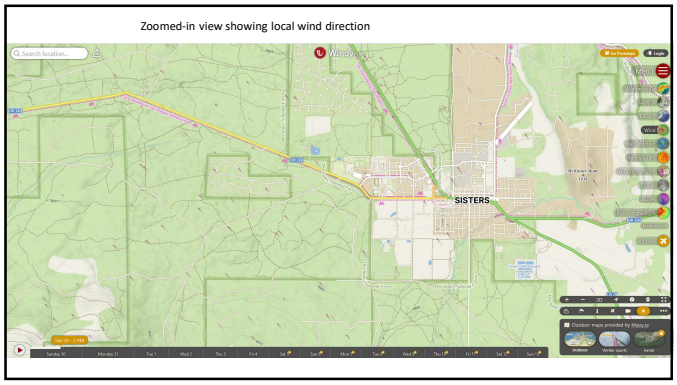

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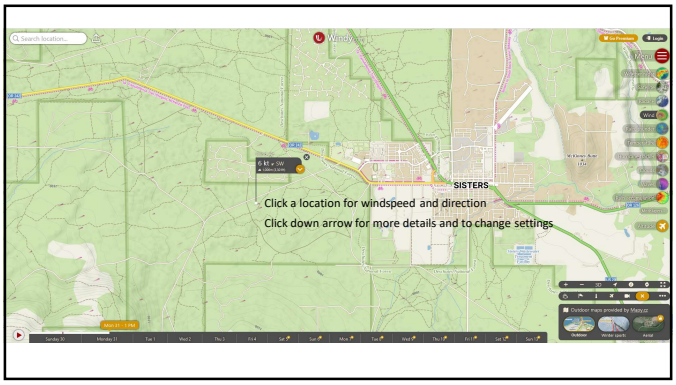

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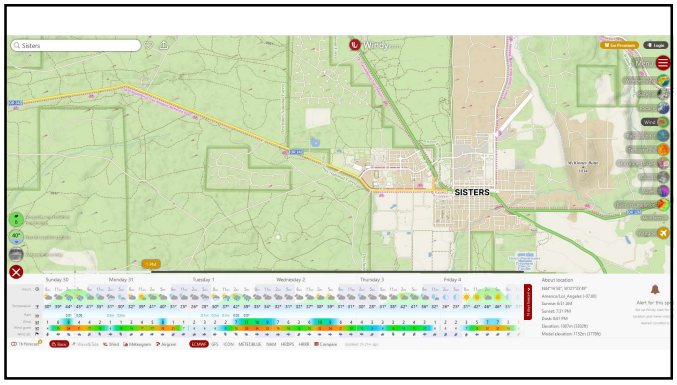

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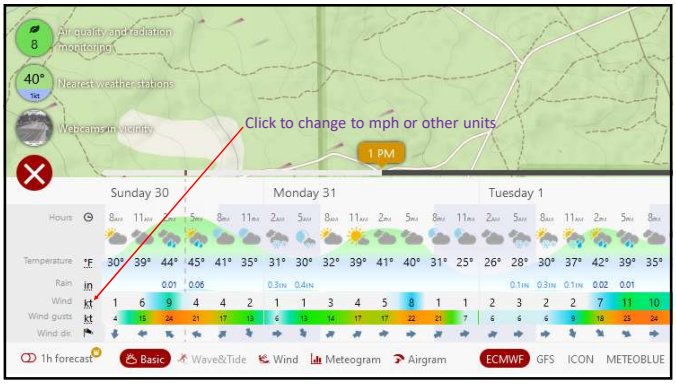

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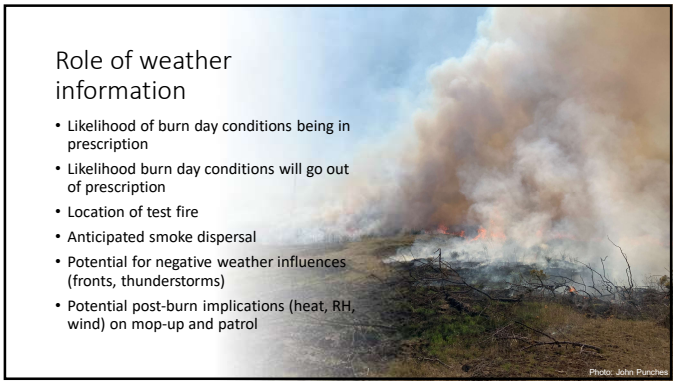

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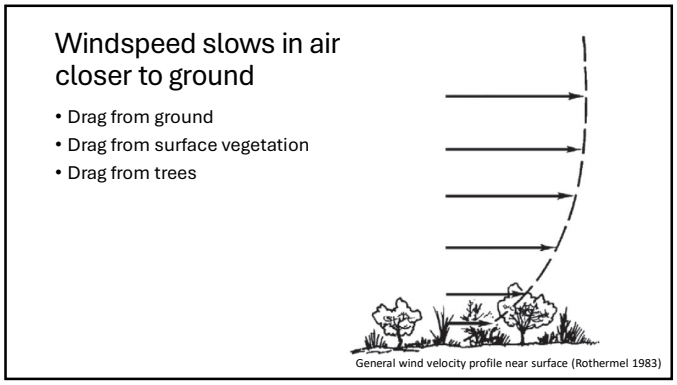

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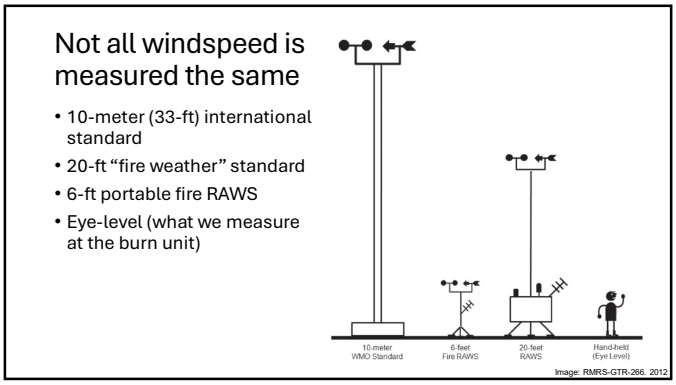
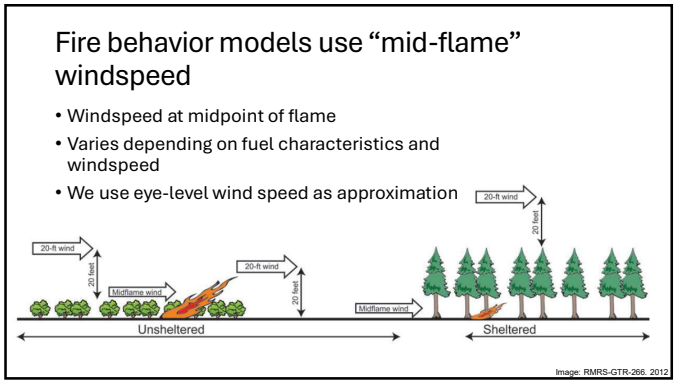
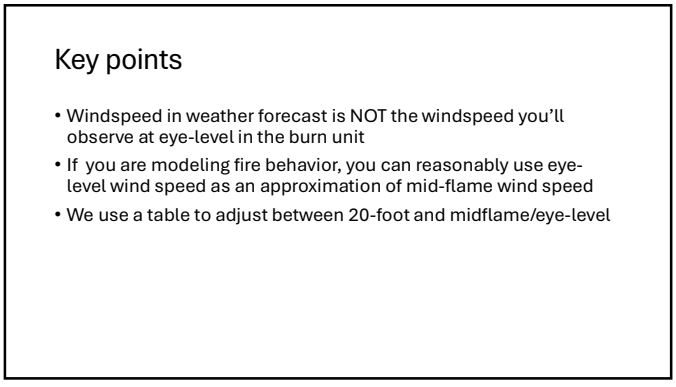


52



53



54

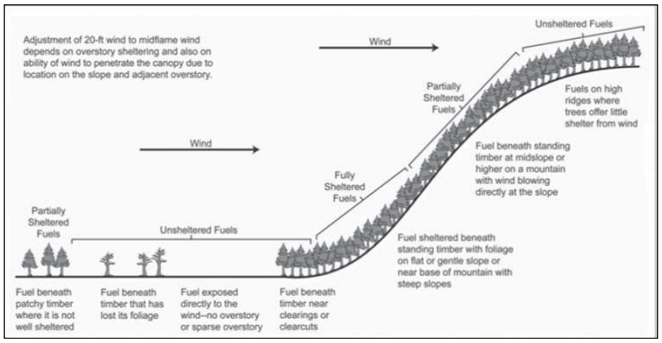


Image Source: Behave Plus help window

55

Overstory sheltering – general guidance

Surface fuel sheltering from the wind	Wind Adjustment Factor (WAF)	Fuel Model
Partially sheltered • Patchy timber • Timber at midslope or higher with wind blowing directly at the slope	0.3	• All fuel models
Fully Sheltered • Standing timber on flat or gentle slope • Standing timber near base of mountain with steep slopes	0.2	• **Open stands.** All fuel models
	0.1	• **Dense stands.** All fuel models

Image Source: Behave Plus help window

56

Overstory sheltering – general guidance

Surface fuel sheltering from the wind	Wind Adjustment Factor (WAF)	Fuel Model
Unsheltered • Surface fuels not sheltered from the wind • No overstory • Sparse overstory • Timber that has lost its foliage • Timber on high ridges where trees offer little sheltering	0.5	• 4, 13 • GR7, GR8, GR9 • SH4, SH5, SH7, SH8, SH9 ~~(depth < 0.9 ft, < 0.3 m)~~ More than 2.7 feet
	0.4	• 1, 2, 3, 5, 6, 7, 10, 11, 12 • GR2, GR3, GR4, GR5, GR6 • GS1, GS2, GS3, GS4 • SH1, SH2, SH3, SH6 • TU2, TU3, TU5 • SB1, SB2, SB3, SB4 (depth 0.9 - 2.7 ft, 0.3 - 0.8 m)
	0.3	• 8, 9 • GR1 • TU1, TU4 • TL1, TL2, TL3, TL4, TL5, TL6, TL7, TL8, TL9 ~~(depth > 2.7 ft, > 0.8 m)~~ Less than 0.9 feet

Image Source: Behave Plus help window

57